

<b>Notice of References Cited</b>	Application/Control No. 10/728,152	Applicant(s)/Patent Under Reexamination WANG, XIAO-PING	
	Examiner Kimmhung Nguyen	Art Unit 2629	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,448,900	09-2002	Chen, Jong	340/815.45
*	B	US-6,329,593	12-2001	Yang, Chung-Chin	174/559
*	C	US-2003/0189829	10-2003	Shimizu et al.	362/240
*	D	US-6,501,084	12-2002	Sakai et al.	250/504R
*	E	US-6,364,507	04-2002	Yang, Chung-Chin	362/248
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office  
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20061118



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,152	12/04/2003	Xiao-Ping Wang	LED.01	6778
23416	7590	11/28/2006		
LAW OFFICES OF CLEMENT CHENG 17220 NEWHOPE STREET #127 FOUNTAIN VALLEY, CA 92708				
			EXAMINER NGUYEN, KIMNHUNG T	
			ART UNIT 2629	PAPER NUMBER

DATE MAILED: 11/28/2006

Due Date 1/28/06  
fax (303) 333-8802

Please find below and/or attached an Office communication concerning this application or proceeding.

JAN 16 2007

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/728,152	WANG, XIAO-PING	
	Examiner	Art Unit	
	Kimnhung Nguyen	2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 04 December 2003.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☒ Claim(s) 1-10 and 14-16 is/are allowed.

6) ☒ Claim(s) 11 and 12 is/are rejected.

7) ☒ Claim(s) 13 is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

U.S. Patent and Trademark Office  
PTOL-326 (Rev. 08-06)

Office Action Summary

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**DETAILED ACTION**

This application has been examined. The claims 1-16 are pending. The examination results are as following.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6, recites the limitation "the lower half" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claims 1-6, recites the limitation "the location" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claims 1-6, recites the limitation "the opening" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

Claim 11, recites the limitation "the lower half" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 12, recites the limitation "said outer cover" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 13, recites the limitation " the outer cover" in line 4, and the location" in line 5. There is insufficient antecedent basis for this limitation in the claim.

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*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 6,448,900) in view of Yang (US 6,329,593).

As to claim 11, Chen discloses in fig. 5A, a plurality of LED display elements with built-in resistors comprising: a plurality of link units (M1, M2 and Mx); a plurality of wire pair connecting the link to form external power supply wires (VAC1); each link unit comprising at least: an inherent tray housing (because Chen discloses the circuit of the display board module is made on a printed circuit into a matrix base (51) and enclosed by an upper cover (52) and lower cover (53), see fig. 1, col. 2, lines 27-35); therefore, a PCB securely received in the housing; a plurality of light emitting diode elements (LED) mounted on the PCB in electrical connection with the wire pairs at a wire pair connection point, the composed of LED are resins in the internal of resistors (see col. 3, lines 12-26), the wire pair connection point to the PCB and a lower half of the light emitting diode elements. However, Chen does not disclose a cured waterproof.

Yang discloses in fig. 1, a waterproof LED display has a housing and a circuit board with a plurality of LEDs provided in the housing (see abstract).

It would have obvious to one of ordinary skill in the art at the time the invention was made to implement the water proof LED display has a housing and a circuit board with a

plurality of LEDs provided in the housing as taught by Yang into the display element with built-in resistors composed of resin of Chen for producing the claimed invention because this would provide an LED display which has an effective waterproof function to prevent water and water vapor from penetrating inside via gaps at a rear portion thereof (see col. 1, lines -37).

As to claim 12, Chen discloses an inherent housing and outer cover are made of polycarbonate material because Chen discloses the housing comprising the first resin 13 and a second resin 14, the resin 13, 14 are cover of the LED 11, and the resin material is also a kind of polycarbonate see col. 3, lines 12-17).

*Allowable Subject Matter*

5. Claims 1-10 and 14-16 are allowed.
6. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:  
The present invention is directed to a waterproof LED chain comprising a plurality of link units; a plurality of wire pair connecting the link units in electrical series; at least one wire connected to a link units to form external power supply wires, each link unit comprising at least a tray housing; a PCB securely received in the housing; a plurality of light emitting diode elements mounted on the PCB in electrical connection with the wire pairs at a wire pair connection point. The combination of the closest prior art of Chen (US 6,448,900) and Yang (US 6,329,593) showed a similar invention, however, they fail to teach that wherein the cured waterproof resin

inside the tray housing encasing the lower half of the light emitting diode elements forms a surface defining an outer cover sealing the opening of the tray housing to enclose the PCB, wherein the outer cover has a plurality of apertures corresponding to the number of said LED elements and the external power wires at a location where the LED elements and the external power wires protrude from the cured waterproof resin as claims 1 and 13; or soldering a plurality of wire pairs at the end of each PCB at wire connection points to form a continuous chain of prepared PCB units, each wire pair consisting of a positive and negative wire, placing a prepared PCB unit each having LED elements mounted on it into a tray housing, then pouring liquid epoxy resin in to the tray sealing the wire connection points and bottom portion of the LED elements as claim 7.


*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimnhung Nguyen  
November 21, 2006



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600



JAN 16 2007

PTO/SB/97 (09-08)


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